

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2004/014445

International filing date (day/month/year)
24.09.2004

Priority date (day/month/year)
26.09.2003

International Patent Classification (IPC) or both national classification and IPC
G03F7/20, G12B21/06, G03F1/14

Applicant
CANON KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Menck, A

Telephone No. +31 70 340-4578



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/014445

Box No. II Priority

1. ☐ The following document has not been furnished:
- ☐ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
 - ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. ☒ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
4. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	8,9,13
	No: Claims	1-7,10-12
Inventive step (IS)	Yes: Claims	
	No: Claims	1-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

- 1 The following documents are referred to in this communication:

D1 : WO 02/10830 A

D2 : FANG CHEN ET AL: "A study of near-field aperture geometry effects on very small aperture lasers (VSAL)" PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING SPIE-INT. SOC. OPT. ENG USA, vol. 5069, no. 1, 16 September 2003 (2003-09-16), pages 312-318, XP002318601 ISSN: 0277-786X

D3 : US 5 973 316 A

D4 : US 6 304 527 B1

2 INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document):

A near-field light generating method (abstract) for forming a fine light spot at a portion adjacent to a fine opening having a size of not more than a wavelength (page 3, lines 10 - 12) of light on a light outgoing side of the fine opening by irradiating the fine opening with the light (page 2, lines 4 - 11), said method comprising: forming a light spot having a length and a width which are substantially equal to each other (implicit: length and width would necessarily be substantially equal to each other, because such rectangular openings form such light spots) by the fine opening, the fine opening (502, cf. figure 5; page 13, lines 9 - 14) having a rectangular shape having a length and a width which are different from each other.

The same applies *mutatis mutandis* to **claims 5, 10, and 12.**

A similar novelty objection can be based on document D2.

4 INDEPENDENT CLAIM 8

- 4.1 The present application does not meet the criteria of Article 33(1) PCT, because the

subject-matter of claim 8 does not involve an inventive step in the sense of Article 33(3) PCT.

Document D3 discloses (the references in parentheses applying to this document):
*A near-field exposure method comprising:
providing a near-field exposure mask (figure 8A, 8B), and
exposure an exposure object (column 6, lines 35 - 62) to light by using the near-field exposure mask.*

The difference between **claim 8** and D3 is the near-field exposure mask according to claim 5.

This difference solve the problem of how to write a fine pattern with a higher efficiency.

Document D1 discloses this difference (figure 5, page 13, lines 9 - 14) in the field of near-field optical technology.

Therefore, the person skilled in the art would use the mask provided by D1 to solve the above mentioned problem, therefore **claim 8** is not inventive.

7 INDEPENDENT CLAIM 13

- 7.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 8 does not involve an inventive step in the sense of Article 33(3) PCT.

Document D4 discloses (the references in parentheses applying to this document):
A recording and reproducing apparatus (abstract, figure 11) for effecting recording and reproduction with respect to a recording medium.

The difference between **claim 13** and D4 is the near-field optical head according to claim 10.

This difference solve the problem, of how to obtain a more efficient recording apparatus.

D1 discloses (page 3, lines 9 - 25) this difference in the field of near-field optical technology.

Therefore, the person skilled in the art would use the near-field optical head provided by D1 to solve the above mentioned problem, therefore **claim 13** is not inventive.

8 DEPENDENT CLAIMS 2-4,6,7,9,11

The dependent claims do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).